

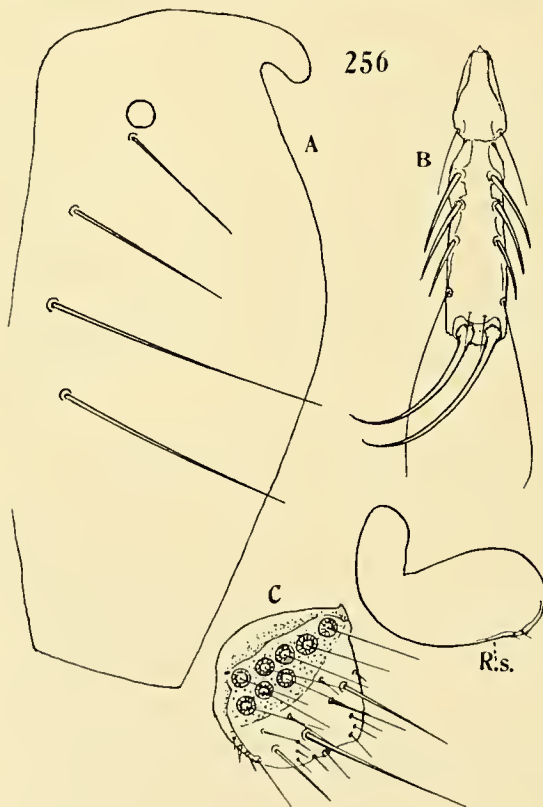
## ON FIVE NEW SIPHONAPTERA FROM THE REPUBLIC OF ARGENTINA.

By KARL JORDAN.

(With 10 text-figures.)

THE species and subspecies here described form part of a collection sent to the British Museum by Dr. J. M. de la Barrera, of the Instituto Bacteriologico at Buenos Aires. The specimens being obtained in western districts of the Republic whence we have received but little material, it is not surprising that several of the fleas are new. The three *Parapsylli* here described are particularly interesting, widening our knowledge of the morphology of the genus in more than one direction. The species I have the pleasure in naming after Dr. Barrera is distinguished from all the other *Parapsylli* by the long proboscis being 8-segmented; another species differs in the tarsal claws being strongly asymmetrical in both sexes; and the third species is exceptional in having more than 80 pits in the sensilium of the ninth abdominal tergite. The collection further contains

an example of geographical variation of a species of flea within the Republic, the specimens of *Rhopalopsyllus platensis* from the foothills of the Andes being different from those we have from east and west of the Rio de La Plata. A collection like the present makes one hope that the survey of the Argentinian Rodent fauna will be continued and further material of Siphonaptera be forthcoming.



1. ***Hectopsylla gemina* sp. nov.**  
(text-fig. 256).

♀. Agrees with *H. eskeyi* Jord. 1933 in the subbasal position of the pits of the sensilium (text-fig. 256, C) and with *H. stomis* Jord. 1925 in the shape and small size of the spermatheca (text-fig. 256, R.s.); differs from all the species in the metepimerum and tarsi.

Bristles of metepimerum (4) and abdominal tergites I and II stronger than in the allied species; upper posterior angle of metepimerum (text-fig. 256, A) produced into a hook, which varies in size, but is much more curved down than in *H. stomis* and *H. eskeyi* in all

7 specimens. Stigmata of abdominal segments I to VII slightly smaller than in *H. stomis* and much smaller than in *H. eskeyi*, the diameters measuring 11, 13 and 17 in the three species. Bristles at apical margin of tergite VIII variable in size, 2 to 5 of them being larger than the others. Segment II of midtarsus longer than I and in hindtarsus not much shorter than I, the measurements being: midtarsus 7, 9, 7, 5, 12; hindtarsus 16, 12, 8, 6, 13. Segment V bears in all tarsi only 3 pairs of plantar bristles (text-fig. 256, B, midtarsus); in *H. stomis* there are very occasionally also 3 pairs or 3 bristles on one side and 4 on the other in one or the other tarsus, in *H. gemina* the number is constantly 3 in the 7 specimens before me.

*Hab.* Argentina: Fortin Uno, Rio Negro, August 1937, on *Microcavia australis*, 2 ♀♀ (type <sup>1</sup>); Santa Rosa, Mendoza, February 1938, on the same host, 5 ♀♀.

## 2. *Rhopalopsyllus platensis cisandinus* subsp. nov.

♂♀. A western modification of *Rh. platensis* Jord. & Roths. 1908, distinguished by the reduction in the number of bristles on the thorax, abdomen and legs. Genitalia the same as in *Rh. pl. platensis*, of which we have a series from eastern districts of Argentina and from Uruguay.

Bristles on pronotum in two rows, occasionally a single additional dorsal bristle in front of the first row: in ♂ 12 to 15, 15 or 16, in ♀ 11 to 15, 15 to 18. On mesonotum in ♂ 16, 13 to 15, in ♀ 13 to 18, 13 to 15. On metanotum three rows, in ♂ 7 to 11, 15 to 18, 14, in ♀ 8 to 10, 16 to 19, 15 or 16. On mesopleura in ♂ 5, in ♀ 5 or 6; on metepimerum two rows, in ♂ 4 or 5, 3 to 5, in ♀ 3 to 5 (usually 4), 4.

On abdominal tergites I in ♂ 1, 11 to 14, 10 to 13, in ♀ 1 to 3, 11 to 14, 11 or 12; II in ♂ 13 to 16, 16 to 18, in ♀ 16 to 19, 17 to 21; III in ♂ 10 to 13, 16 to 18, in ♀ 16 to 18, 17 to 20; IV in ♂ 8 to 12, 15 to 19, in ♀ 12 to 17, 17 to 19; V in ♂ 5 to 10, 15 or 16, in ♀ 15 or 16, 17; VI in ♂ 5 to 8, 14 or 15, in ♀ 9 to 14, 16; VII in ♂ 5 to 7, 9 or 10, in ♀ 9 or 10, 12 or 13. Lateral bristles on each side of basal sternum of abdomen in ♂ 6 to 10, in ♀ 17 to 24; on the other sternites, the two sides together: on III in ♂ 4 to 6, 6 to 9, in ♀ 9 to 15, 10 to 13; IV in ♂ 0 or 1, 6 to 8, in ♀ 0 or 1, 8 to 11; V in ♂ 0, 8, in ♀ 0, 8 to 10; VI in ♂ 0, 7 to 9, in ♀ 0, 10 to 12; VII in ♂ 0, 8, in ♀ (the two rows together) 15 to 19.

On outer surface of hindfemur a subventral row of 7 to 9 bristles in both sexes and above the row 2 to 5; on inner surface a subventral row of 5 or 6 in ♂ and 6 or 7 in ♀. On outer surface of hindtibia in ♂ 11 to 14 subdorsal and lateral bristles and 6 or 7 subventral ones, in ♀ 12 to 15 subdorsal and lateral and 6 to 8 subventral.

Above stigma of tergum VIII of ♂ and ♀ 9 to 11 bristles on the two sides together; from stigma downwards in ♀ on outer surface of each side 34 to 41, on inner surface at and near margin 13 to 17; on sternum VIII of ♂ 10 to 15 on right and left sides together.

In *Rh. pl. platensis* the basal abdominal sternum of ♂ bears each side more than 15 bristles; the numbers are on the two sides together on metanotum in ♂ 10 to 12, 21 to 26, 16 to 18, in ♀ 10 to 14, 19 to 28, 17 to 21; on abdominal tergum III in ♂ 15 to 22, 21 to 23, in ♀ 20 to 28, 21 to 26; VII in ♂ 7 to 12, 15 or 16, in ♀ 11 to 17, 14 or 15; abdominal sternum VII of ♀ 19 to 25 (usually

<sup>1</sup>The word "type" in brackets means here (and in other cases) that one of the specimens has been selected as the type, the other specimens mentioned being paratypes.

more than 20). On outer surface of hindfemur in ♂ a subventral row of 9 to 12 and above it 6 to 8, in ♀ a row of 9 to 11 and above it 7 to 10 (rarely fewer than 7).

*Hab.* Argentina : Mendoza, January 1938, on *Microcavia australis*, a series (type) ; Telen, La Pampa, April 1936, on *Graomys griseoflavus*, 1 ♂, on *Microcavia australis*, 1 ♂.

### 3. *Parapsyllus galeanus* sp. nov. (text-figs. 257-260).

♂♀. Nearly related to *P. budini* Jord. & Roths. 1923, but differs from all known species in the claw being strongly asymmetrical in all tarsi.

In front of eye 4 bristles, of which the first and third counted from below are long, in ♂ 2 or 3 small additional bristles farther upwards, below eye in ♂ 3 and in ♀ 2 bristles, behind eye 2 or 3 small ones, of which the lowest is the longest. On occiput a longitudinal row of 3 in ♂ and only 1 in ♀, which is placed near middle ; a subapical row of 11 or 12 (the two sides together) in ♂ and ♀, with an additional bristle below the long ventral one in ♀ ; above antennal groove the usual dense row of short bristles in ♂, only a few such bristles posteriorly in ♀. Segment I of antenna much longer and broader in ♂ than in ♀, with an apical row of bristles which do not reach the middle of the club in ♂, whereas in ♀ they are much longer, some of them extending beyond the club ; segment II for the greater part covered by I, visible only at the sides, where it bears some small hairs. Proboscis reaching to near apex of forecoxa in ♀, a little shorter in ♂ ; labial palpus consisting of 5 segments, V being as long as or a little longer than III + IV. Proportional length of segments of maxillary palpus in ♂ 11, 14, 9, 16, in ♀ the segments a little shorter, slightly variable in both sexes.

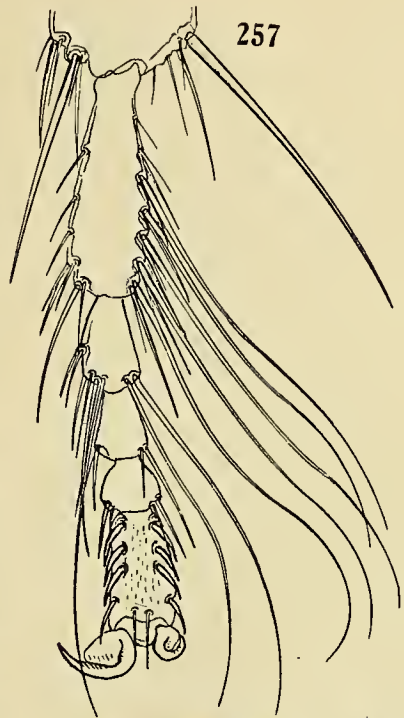
On thoracic tergites two rows of bristles, with a few small subbasal dorsal hairs on mesonotum ; the numbers are in ♂ on pronotum 6 to 10, 11 to 13, on mesonotum 9 to 11, 10 or 11, on metanotum 9 to 13, 9 to 12, the anterior row containing in ♀ 2 or 3 fewer bristles ; on mesopleura 5 and on metepimerum 2 or 3, 3 in both sexes. Apical area of metanotum more (♀) or less (♂) membranous.

The abdominal tergites bear two rows of bristles, except the posterior segments of ♂, the numbers being on I in ♂ 10 to 13, 8 to 10, in ♀ 8 to 12, 8 ; II in ♂ 7 to 13, 13 to 16, in ♀ 9 to 12, 12 or 13 ; III in ♂ 2 to 11, 13 to 15, in ♀ 10 to 12, 12 to 14 ; IV in ♂ 0 to 4, 13 or 14, in ♀ 10 to 12, 13 ; V in ♂ 0 to 2, 13 or 14, in ♀ 9 to 11, 12 or 13 ; VI in ♂ 0, 12 to 14, in ♀ 9 to 13, 12 to 14 ; VII in ♂ 0, 11 to 13, in ♀ 9 to 12, 8 to 12. On basal sternite (each side) in ♂ 0 to 2 small lateral bristles, in ♀ 12 to 17, besides the few bristles of the subapical row ; the numbers on the other sternites are (the two sides together as in the case of the tergites) : III in ♂ 0, 6 to 8, in ♀ 13 or 14, 9 to 12 ; IV in ♂ 0, 6 to 8, in ♀ 2 to 5, 10 or 11 ; V in ♂ 0, 7 or 8, in ♀ 1 to 4, 13 to 16 ; VII in ♂ 0, 6 to 8, in ♀ 7 to 9, 16 to 18.

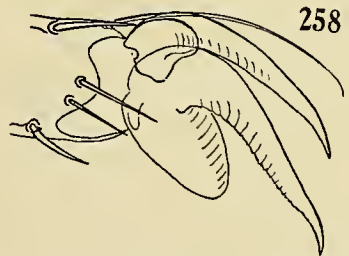
The forecoxa bears 28 to 38 bristles in ♂ (not counting the short basal ones) and 22 to 26 in ♀. The mid- and hindfemora have a subventral row on outer and inner surfaces and no lateral bristles above these rows, the numbers being on outside of hindfemur in ♂ 10 to 15 and in ♀ 9 to 13, on inside in ♂ 9 to 14 and in ♀ 9 to 12 ; as a rule these bristles are more numerous on outside in ♂ and on inside in ♀, with exceptions. Foretibia with 6 dorsal notches and an additional stout apical bristle ; mid- and hindtibiae with 7 or 8 dorsal notches ; on outer surface of hindtibia in ♂ 20 or 21 dorsolateral bristles, in ♀ 12 to 16 ; the longest dorsal and ventral apical bristles of hindtibia reach beyond apex of tarsal segment I.



Tarsi very distinctive : V in all tarsi only twice as long as broad (claw excluded) (text-fig. 257) ; I and II of midtarsus almost equal in length ; I of hindtarsus about half as long as hindtibia, three times as long as broad, II short, triangular, only half as long again as broad, IV in all tarsi broader than long. Measurements : midtarsus, in ♂ 12, 11 or 12, 8, 5 or 6, 17, in ♀ 11, 12, 8 or 9, 5, 16 ; hindtarsus in ♂ 32 or 33, 13 or 14, 9 or 10, 7, 17, in ♀ 28, 13 or 14, 9, 6, 17. Bristles of hindtarsus very long, longer in ♂ than in ♀ (text-fig. 257, ♂) ; in ♂ I with 5 notches on posterior side bearing each a long bristle and a short stiff one, the proximal long bristles reaching to apex of V, the others beyond it ; II with 3 long bristles, two on the posterior side and one anteriorly, all 3 apical, on the anterior side also a stiffer one which extends to near middle of V ; in ♀ I with 2 or 3 long bristles, the long apical one reaching to near apex of V, the longest of II extending to apex of V, not beyond. Inner claw nearly as long as V (foreshortened in text-fig. 257), the tooth much enlarged in both sexes, broad and about  $\frac{2}{3}$  the length of the claw ; outer claw small (text-fig. 258).

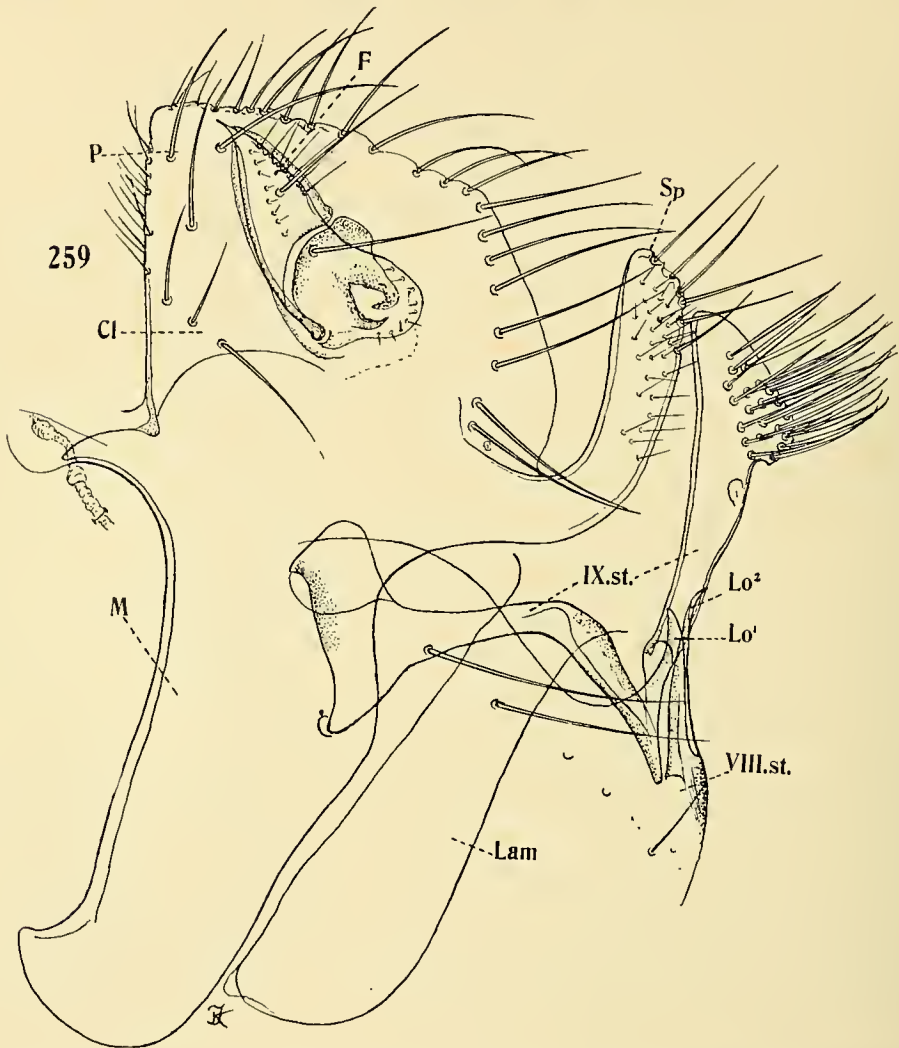


Modified Segments.—♂. Of the same type as in *P. budini*, but different in detail. Sternum VIII with two processes each side, both narrow and pointed (text-fig. 259), the upper one ( $L^1$ ) the broader and shorter, more or less curved upwards, the lower one ( $L^2$ ) curved downwards at end, both somewhat variable ; at some distance forward 2 or 3 bristles each side and farther up a vertical row of 3 long ones, of which the lowest is the shortest and often absent. Apex of clasper (Cl) less rounded than in *P. budini*, the angle being about  $90^\circ$  or less, distal margin rounded, obtusely angulate in middle, often more rounded-elbowed than in the specimen figured ; at dorsal margin many small bristles, especially numerous



on inner side, on lateral surface about 8, nearly all long, from upper angle to median elbow a marginal row continued downward by a submarginal row of longer ones, the entire row containing some 20 bristles, of which the upper ones are small ; ventral spur (Sp) of clasper proximally more curved than in *P. budini*, the horizontal portion dorsally almost straight or feebly concave, ventrally convex basally and apically and nearly straight in middle ; the spur has no bristles on outer surface, but about 20 on inner side, of which 5 or 6 are long and placed at the ventral apical margin ; inner side of clasper with many small bristles in apical half. Digitoid (F) not projecting beyond the margin of the large clasper, elongate-conical, with the apex drawn out into a point, anterior

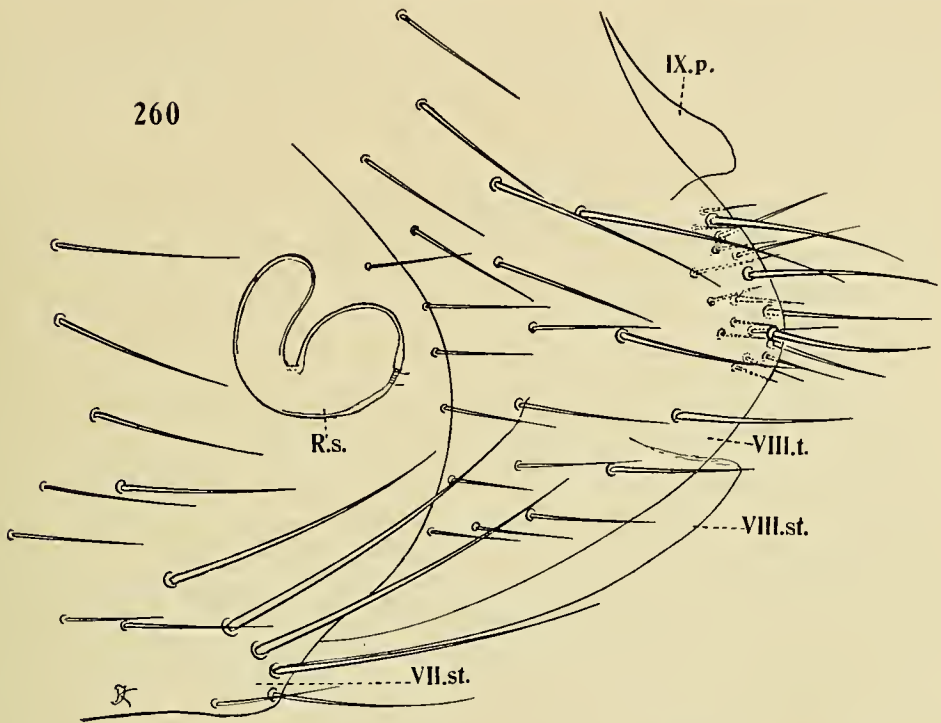
margin more or less convex, posterior margin partly concave, bearing in upper half a row of 6 to 8 thin bristles and a lateral row of small ones; posterior portion of base rounded, bearing a row of small bristles. Manubrium (M) very broad, broader than the lamina (Lam) of the phallosome. Vertical arm of sternite IX elbowed, apex wider than in *P. budini*, both the forward and backward projections longer; ventral arm nearly straight dorsally, slightly curving upwards,



apical angle rounded, not pointed as in *P. budini*, apical fourth of segment abruptly enlarged ventrad, this area bearing on outer side some 20 longish bristles which are more or less compressed, resembling slender blades of grass. Parameres of phallosome ending in a pair of short pincers curved towards each other, the lower one less pointed than the upper and ventrally widened into a rounded lobe; dorsal hood rounded at apex.

♀. Sternum VII broadly rounded, the margin ending at the ventral bristles of the posterior row; at this angle 3 or 4 long bristles rather close together, on each side of the body. Apical margin of tergum VIII (text-fig. 260) rounded, without sinus below apex, above stigma 4 to 7 bristles each side, from stigma to

ventral margin 21 to 24 bristles, most of them long, at apex 3 or 4 long marginal bristles on outer side and 17 to 20 marginal and submarginal ones on inside, most of which small. Pleural sclerite of segment IX (IX.p.) very distinct above dorso-apical margin of VIII.t. On side of anal tergum, between the small papilla-like bristle, ventral margin and stylet 4 or 5 bristles. Body of spermatheca



(R.s.) short-ovate, sometimes almost globular, as long as the posterior margin of tail (margin on anal side).

Length: ♂ 2.4 to 2.8 mm., ♀ 2.9 to 3.2 mm.; hindfemur: ♂ 0.55, ♀ 0.50 to 56 mm.

*Hab.* Argentina: San Juan, May 1938 on *Galea leucoblephara*, a series of both sexes.

#### 4. *Parapsyllus barrerai* sp. nov. (text-figs. 261, 262).

♂♀. The most conspicuous distinguishing character of this species is the long proboscis, which extends below the base of the forefemur, the labial palpus being anteriorly divided into 8 segments. This distinction, though very interesting, is not of generic value, at least not in a classification based on relationship. The new species is undoubtedly closely akin to *P. budini* and allies with 5-segmented labial palpi. Moreover, the ♀ of *P. onychius* Jord. & Roths. 1923 has 6 segments and the ♂ only 5, and in the present new species two of the segments are separated only on the anterior side, all of which shows that the segmentation is in flux and not of primary importance in this case.

In front of eye 3 bristles of which the middle one is short and the others long, farther forward a longish bristle in ♂ only; below and behind eye a row of 7 or 8, of which some are small. On occiput in ♂ the usual row of short bristles (about 24 in this species) above antennal groove and a longitudinal row of 3 long



ones, in ♀ a median bristle and a ridge which bears posteriorly a few small ones ; in both sexes a subapical row of 12 (on the two sides together), with an additional short bristle below the long ventral one in ♀. Bristles of antenna quite short in ♂ and ♀. Length of segments of maxillary palpus in ♂ 11, 15, 11, 19, in ♀ 15, 21, 14, 22. In ♂ segments 4 and 5, in ♀ 6 and 7 not separated on posterior side (in this pair).

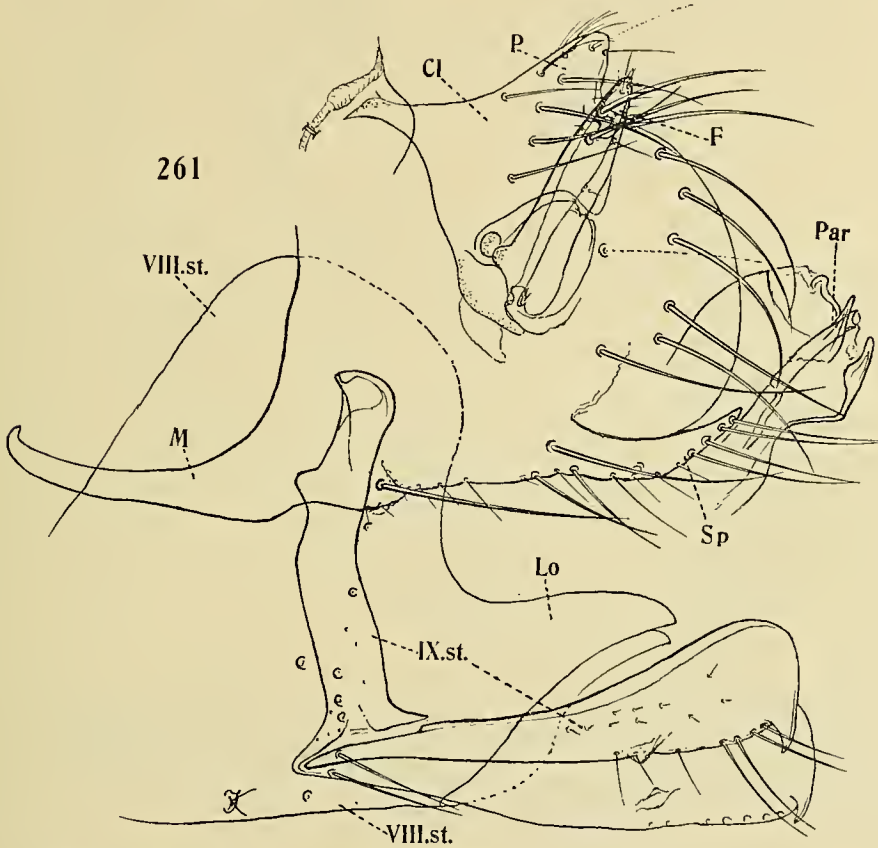
Bristles on thoracic and abdominal nota in two rows : on pronotum in ♂ 7, 16, in ♀ 5, 16 ; on mesonotum in ♂ 7, 12, in ♀ 5, 13 ; on metanotum in ♂ 9, 12, in ♀ 5, 14 ; on mesopleura in ♂ 5, in ♀ 7 ; on metepimerum in ♂ 2 or 3, 3, in ♀ 2 or 3, 4.

Bristles on abdomen : on tergites I in ♂ 6, 11, in ♀ 12, 14 ; II in ♂ 10, 15, in ♀ 20, 18 ; III in ♂ 1, 14, in ♀ 20, 16 ; IV in ♂ 0, 14, in ♀ 20, 16 ; V in ♂ 0, 14, in ♀ 19, 15 ; VI in ♂ 0, 13, in ♀ 23, 15 ; VII in ♂ 0, 12, in ♀ 24, 13. On basal sternum in ♂ 5 lateral ones on one side, 6 on the other, in ♀ 34 and 44 ; on the other sternites, the two sides together : on III in ♂ 2, 8, in ♀ 16, 12 ; IV in ♂ 1, 8, in ♀ 2, 10 ; V in ♂ 0, 8, in ♀ 1, 10 ; VI in ♂ 0, 8, in ♀ 6, 12. Striation of basal sternite not dense.

Forecoxa with about 25 bristles in ♂ and 38 in ♀. On outer side of hindfemur a subventral row of 6 bristles in ♂ and 1 lateral bristle, in ♀ the row containing 7 to 9 and there being 3 lateral ones ; on inner side the numbers are 9 or 10 in ♂ and 12 to 15 in ♀, no lateral bristles. On foretibia 5 dorsal pairs of strong bristles, the subbasal pair absent ; mid- and hindtibiae with 6 dorsal notches, two of them in basal area, two about middle and two at and near apex, in between second and third notches 1 or 2 small bristles, between fourth and fifth 1 in ♂ and 2 or 3 in ♀ ; on outer surface of hindtibia in ♂ 7 to 9 dorsolateral bristles and 5 or 6 subventral ones, in ♀ 10 dorsolateral, 1 or 2 lateral and 7 or 8 subventral ; the long anterior as well as posterior apical bristle of midtibia extends well beyond apex of tarsal segment I, in hindtibia to apex or close to it. Hindtarsal II with 3 long apical bristles, of which the longest of the posterior side reaches beyond (♂) or to (♀) apex of V, the second beyond middle of V and the third to its base ; V in hindtarsus more than three times as long as broad ; claw long and slender, in fore- and midtarsi as long as V, in hindtarsus shorter than V, basal tooth not broader than base of claw. Length of segments : midtarsus in ♂ 21, 17, 9, 6, 16, in ♀ 34, 29, 14, 9, 21 ; hindtarsus in ♂ 40, 28, 13, 9, 19, in ♀ 60, 40, 17, 11, 23.

Modified Segments.—♂. Above stigma of tergum VIII 5 bristles each side. Sternum VIII with one subventral lobe (L) each side, the lobe triangular, pointed, dorsally convex, ventrally almost straight, measured dorsally about as long as it is broad in middle ; beyond middle of segment a vertical row of about 20 bristles on the two sides together, the upper ones long, lower ones small (text-fig. 261). Dorsal apical angle of clasper (P) projecting, triangular, posterior margin from this lobe to the ventral spur rounded ; from base of lobe to ventral spur a row of 8 or 9 long bristles, the upper 3 marginal, the others submarginal ; on dorso-apical lobe one longish bristle and a number of smaller ones, on outer surface 8 long and 3 or 4 near dorsal margin shorter, at dorsal margin a number of small bristles. Ventral spur of clasper (Sp) in shape like a scythe, gradually narrowing to a sharp point, upper margin slightly concave, ventral margin convex, at ventral margin 12 bristles, 4 in apical third and 2 at base of spur about as long as the spur is long dorsally, the others much smaller, between spur and vertical arm

of IX.st. about 6 small bristles. Manubrium (M) narrower than vertical arm of IX.st., apex sharply pointed and turned up. Digitoid (F) narrow, more than four times as long as broad, narrowed from middle to apex, which is sharp, in apical fourth of posterior margin some thin bristles and on lateral surface a few very short ones; F extends above the margin of clasper, but does not reach the dorso-apical angle; the digitoid of the other side (not indicated in figure) is moved farther away from the dorso-apical lobe and appears narrower than the digitoid figured. Vertical arm of sternum IX almost straight, not elbowed, its apex posteriorly evenly rounded, the anterior lower projection also round; ventral

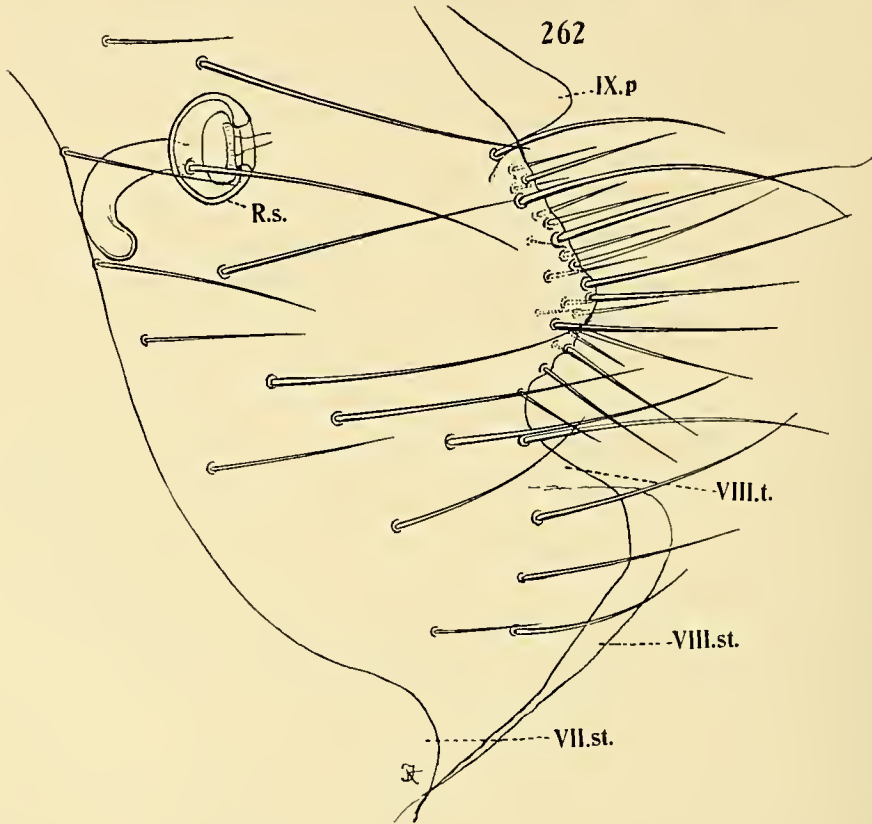


arm gradually widened, its dorsal margin slightly concave and the ventral margin feebly convex, apex dorsally strongly and evenly rounded, ventrally produced into a hook; proximally of this hook 4 moderately long marginal bristles and farther forward 3 small ones, on lateral surface a small number of minute hairs, apex inclusive of hook more than one-fourth as broad as the ventral arm is long. Parameres (Par) of phallosome with two apical teeth, of which one is lateral in our specimen and the other ventral.

♀. Apical margin of sternum VII (text-fig. 262) rounded subventrally, above this lobe incurved, first more strongly and then very feebly, no sinus being formed. On tergum VIII above stigma 8 bristles on one side and 9 on the other; apical margin of widened area sinuate subventrally; the rounded lobe above this sinus bears about 30 bristles, of which about 12 are submarginal on the inner surface; on the lobe below the sinus a subventral row of 3 or 4, and on the lateral surface



between this row and the stigma 13 or 14 bristles arranged in two irregular rows, the anterior ones much the smaller. Spermatheca (R.s.) not in a good position, the tail pointing obliquely towards the observer and therefore somewhat fore-shortened; body subglobular, a little broader than long in this position.



Length: ♂ 2 mm., ♀ 3.5 mm.; hindtibia: ♂ 0.4 mm., ♀ 0.7 mm.

*Hab.* Argentina: San Juan, May 1938, on *Galea leucoblephara*, one pair, type ♂.

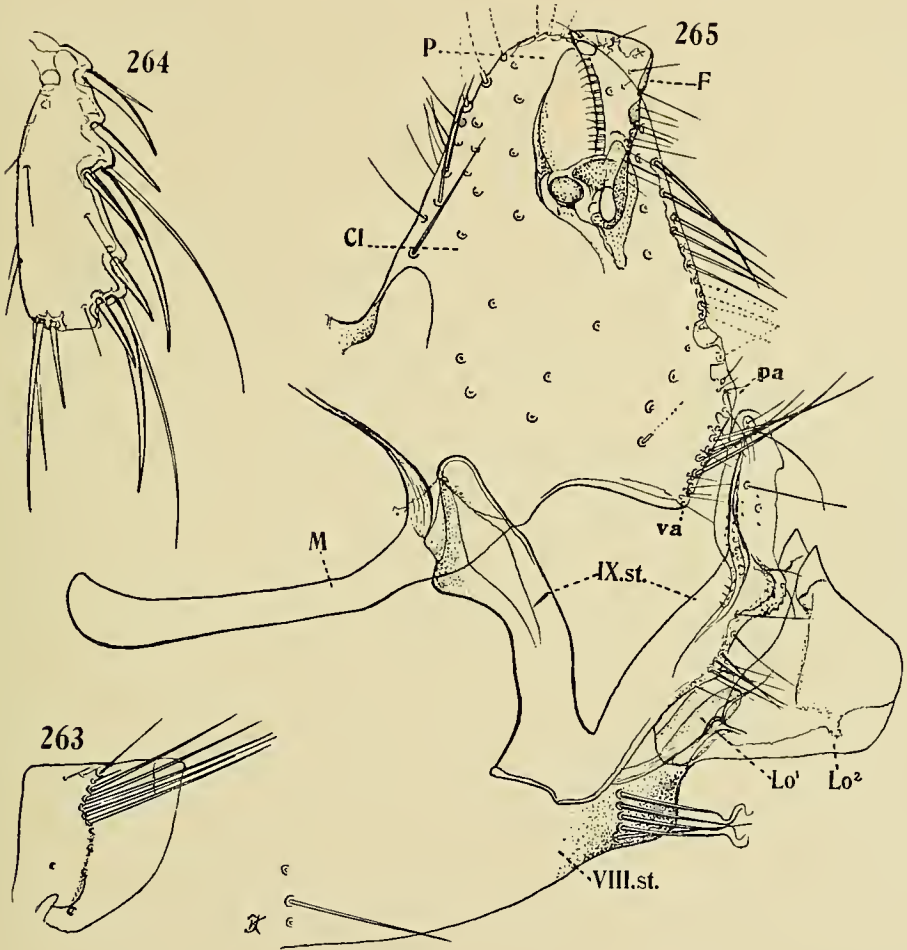
Named in honour of Dr. J. M. de la Barrera, to whom I am very grateful for his additions to the National collection of Siphonaptera.

##### 5. *Parapsyllus andricus* sp. nov. (text-figs. 263-265).

♂. Although the single specimen is much damaged, it is worth describing, as it represents a new species which is exceptional in the long thoracic bristles, the very large number of pits in the sensillum, the length of segment I of the mid- and hindtarsi, etc.

In front of eye an irregular row of 6 bristles, of which the upper 2 are small, before the row a single moderately long bristle, below the eye 5 longish ones and at the apex of the genal process 3 small ones. On occiput a long bristle behind base of antenna, 2 in middle, one obliquely above the other, and a fourth farther back; a subapical row of 14 on the two sides together; above antennal groove the usual row of small bristles (here over 40). Bristles of antenna short. Length of segments of maxillary palpus 12, 14, 10, 18. Proboscis reaching to apex of trochanter; length of segments of labial palpus 14, 12, 9, 13, 23.

Bristles on thorax and abdomen longer than usual. The arrangement of the 20 bristles in the pronotal row different from that in other species ; on each side a subdorsal row of 6 (text-fig. 263) which are placed close together, the bristles as long as the occiput measured from base of antenna to subapical row of bristles, in the dorsal interspace between the two sets of bristles two shorter and some very small, the row continued downwards by 3 bristles, interspace between lowest and next double the width of that between second and third, and this interspace



double that between the third and fourth ; in front of the row a small dorsal bristle and a larger ventral one. Bristles on mesonotum 9, 12, those in posterior row not quite so long as on pronotum, but the subdorsal ones rather closer together than is usual in the genus. On metanotum 8, 12, the posterior ones shorter than on mesonotum and almost normal in position. On mesopleura 5, on metepimerum 2, 2 bristles.

Bristles on abdominal tergites : I 6, 12 ; II 8, 17 ; III 2, 17 ; IV 2, 17 ; V 0, 18 ; VI 0, 17 ; VII 0, 16 ; none of the bristles of the anterior row are dorsal, one of them placed below stigma, as are 2 of the posterior row. No lateral bristles on basal sternum ; subapical ones (the two sides together) on III 2, IV to VI 4, VII 6.

The forecoxa bears about 24 bristles, not counting the small basal ones. On inner side of midcoxa a submarginal row of 11 or 12 slender bristles; the row containing 1 or 2 more on hindcoxa. On outer side of midfemur a row of (apparently) 8 and on inner side a row of 10 or 11 bristles; on hindfemur the outside row contains 13 and the inside one 12 or 13. Dorsal margin of foretibia (text-fig. 264) with 5 notches and in between third and fourth 2 stout bristles; on midtibia 2 notches near base, 3 close together in middle, and 2 at apex, with 3 stout bristles between median and apical notches; on hindtibia the notches nearly as on midtibia, but in the interspace between middle and apex 4 or 5 stout bristles. Posteriorly at apex of midtibia 3 long bristles, one reaching far beyond apex of tarsal segment I, the others to its apex; on hindtibia the longest median bristle as long as tarsal segment I, the longest apical one not quite reaching to apex of I; 10 dorsolateral and lateral bristles on hindtibia, no subventral ones. Segment V preserved only in foretarsus: twice as long as broad, the third pair of plantar bristles much closer together than the first pair; segment of hindtarsus with 3 (or 4?) long apical bristles, the longest probably extending to or beyond V; the distal segments of mid- and hindtarsi missing. Measurements: foretarsus 12, 12, 9, 7, 10; midtarsus 30, 25; hindtarsus 60, 40. Claw slightly asymmetrical; basal tooth of inner claw slightly the larger.

Modified Segments.—♂. Anterior margin of sternum VIII strongly chitinized, appearing as a curved vertical ribbon; ventral margin also more chitinized than usual, with a rounded, strongly chitinized, hump below the base of the ventral arm of IX.st.; at this point, on each side, a row of 5 bristles, of which 4 are apically curved and recurved (text-fig. 264); the segment divided into two lobes each side, one ( $L^1$ ) short, elongate, apically rounded, the other ( $L^2$ ) very large, irregularly triangular, its upper angle pointed, the posterior margin first incurved and then rounded-truncate, ventral margin nearly straight. Clasper (Cl) broadest ventrally, gradually narrowing upwards, but remaining broad (P), the upper angle being broadly rounded; outer margin nearly straight from below apex to 4/5, then obtusely angulate (pa) and slanting downward-forward from this point to the ventral angle (va), which is about  $90^\circ$ , with the tip rounded off; ventral margin incurved. The portion of the clasper above the ventral angle corresponds to the spur of the preceding new species. Anterior (or dorsal) margin of clasper with numerous bristles on the out- and inside; at posterior margin a row of long bristles beginning at some distance from apex with a submarginal one (missing, like most bristles of the clasper); on outer surface about 20 long bristles. Manubrium (M) much narrower than vertical arm of IX.st., widest at apex. Digitoid (F) broadest at apex, much longer than broad, anteriorly concave, posteriorly almost straight, and apically slightly convex; posterior angle rounded off, anterior one acute; the sclerite projects a little above the highest point of the clasper and bears at the posterior margin some slender bristles and at the anterior one a row of very short hairs. Vertical arm of sternum IX slightly convex on posterior side, concave anteriorly, the upper end rounded (outline of anterior portion of dilated apex obscure in the specimen); ventral anterior angle of vertical arm about  $90^\circ$ , not rounded; angle formed by vertical and ventral arms acute; apical third of ventral arm slightly curved up, its apex rounded; ventral margin somewhat convex in middle and studded on and near the convexity with about 10 bristles; farther distally a hump which appears dentate and probably bears bristles in a perfect specimen; a short distance from apex a small but



distinct nose ; on side of apical area several thin longish bristles. Sensilium of pygidium larger than usual in *Parapsyllus*, with more than 40 pits on each side, which is quite exceptional in this genus.

Length : 2.9 mm. ; hindfemur 0.67 mm.

*Hab.* Argentina : San Juan, May 1938, on *Galea leucoblephara*, 1 ♂.

SYNONYMICAL NOTE.—According to the descriptions and figures *Hectopsylla mazzai* Costa Lima, *Rev. med.-cirurg.* xliii, p. 251, figs. (1935), is the same as *H. broscus* Jord. & Roths., Thomps., Yates & Johnst. *Labor Rept.* vii, 1, p. 60, pl. 4, fig. 29 (1906), and *Maxilliopsylla lilloi* Schreitt & Shann., *Bol. Mus. Hist. Tucumán* i, p. 6, fig. (1927) (on inner surface of ear of *Pronops perotis* Wied., Tucumán) is *Rhynchopsyllus pulex* Haller, *Arch. Naturg.* xlvi, p. 72, pl. 6 (1880).

### EXPLANATION OF TEXT-FIGURES.

The lettering of the figures is explained in the text of the descriptions.

Fig. 256.	<i>Hectopsylla gemina</i> , ♀	.	.	.	.	.	.	.	p. 292
257.	<i>Parapsyllus galeanus</i> , hindtarsus, ♂	.	.	.	.	.	.	.	p. 295
258.	„ „ claw of hindtarsus, ♂.	.	.	.	.	.	.	.	p. 295
259.	„ „ genitalia of ♂	.	.	.	.	.	.	.	p. 296
260.	„ „ „ „ ♀	.	.	.	.	.	.	.	p. 297
261.	<i>Parapsyllus barrerae</i> , genitalia of ♂	.	.	.	.	.	.	.	p. 299
262.	„ „ „ „ ♀	.	.	.	.	.	.	.	p. 300
263.	<i>Parapsyllus andricus</i> , pronotum of ♂	.	.	.	.	.	.	.	p. 301
264.	„ „ foretibia	.	.	.	.	.	.	.	p. 301
265.	„ „ genitalia	.	.	.	.	.	.	.	p. 301